STUDENTS, ARMY ENGINEERS SHOW INGENUITY IN ROBOTICS COMPETITION

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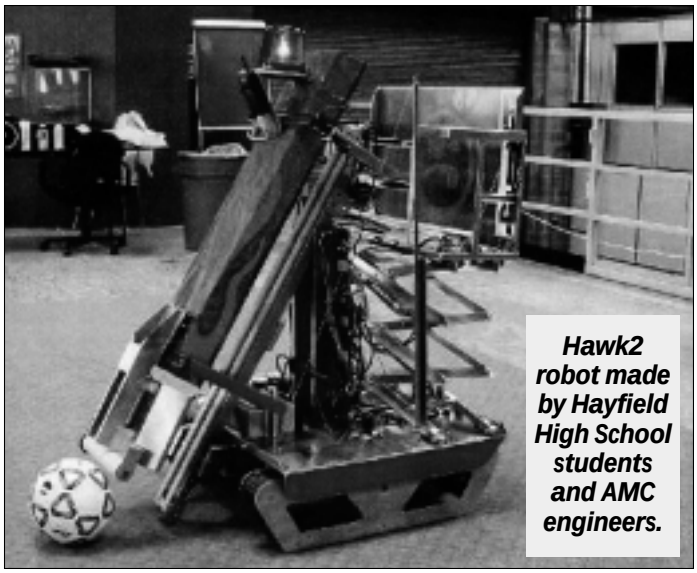

Hawk2 robot made by Hayfield High School students and AMC engineers.

There are some who might say the Army has just the right ingredients to build a robot. And, after 6 intense weeks, students from Hayfield High School in Alexandria, VA, and civilian engineers at the Army Materiel Command's (AMC's) Night Vision and Electronic Sensors Directorate did just that—they built an original robot called Hawk2.

The group sent their robot to FIRST (For Inspiration and Recognition of Science and Technology) for its annual robotics competition. FIRST is a nonprofit organization created to inspire an appreciation of science and technology in students, their schools, and their communities. Founder Dean Kamen said that kids must be shown that science and technology are fun and exciting.

The competition is designed for students and their engineering mentors to battle for honors and recognition that rewards design excellence, competitive play, sportsmanship, and high-impact partnerships between schools, businesses, and communities. The northeast regional robotics competition was held March 7-9, 2002, at Virginia Commonwealth University's Siegel Center, Richmond, VA. During the competition, the students and engineers made minor adjustments to their robot and participated in a "zone zeal" mock soccer game that measured both the robot's effectiveness and the student's collaboration and determination. The judges dubbed Hawk2 the best "picker upper" of all. In fact, it was enough to get them into the national championship competition, which was held April 25-27, 2002, at Walt Disney World's Epcot Center in Orlando, FL.

The adventure began in January 2002 when team sponsors from the northeast region traveled to New Hampshire to pick up identical robot kits and a standard set of rules. Each kit, consisting of several boxes filled with nuts, bolts, electrical wires, and instructions—everything needed to build a robot but the magic of the imagination—presented a challenge from the beginning.

Next, the students and engineers divided into teams to brainstorm, design, construct, and test their machine. Each person's job was critical to the success of the finished robot. The students learned to use sophisticated, computer-aided design programs and worked closely with the engineers; however, the students made the decisions and followed through with their ideas. For 2 hours a day for 6 weeks, including most Saturdays, the teams put their heads together to make the robot come to life.

Many of the students working on Hawk2 were "hooked" last year when their physics teacher, Mike Witte, sponsored the group. Witte is now working for the Night Vision and Electronic Sensors Directorate but continues to lead the project. Other students were attracted to the project by the enthusiasm of "veteran" students, doubling the number of interested students this year. Witte stated, "This year's robot is really neat! It's so capable!"

According to Witte, the Night Vision and Electronic Sensors Directorate is really doing a good thing for students. He said that as their teacher last year, and a volunteer leader this year, he has seen a real turnaround in some of the students. Until they signed up for the FIRST competition, most of them had never met an engineer, much less one who worked for the Army. This project has inspired students to enter the science, math, or engineering career fields. In fact, several of the students will be working at the directorate during their summer vacations.

The Night Vision and Electronic Sensors Directorate is the Army's premier organization for developing technologies that enable soldiers and pilots to shoot, move, and communicate through the night in all kinds of weather and to locate and neutralize landmines. Working with the engineers at the lab adds to the experience of designing a robot and could help these young people recognize that science and engineering are exciting and fulfilling careers they can pursue with the Army.

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